Review: Evaluation of LDEQ Draft Rule and Supporting Documents for Dissolved Oxygen (DO) Criteria Revisions in eastern Lower Mississippi River Alluvial Plains (LMRAP) Ecoregion.

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Comments:

1. Clarifying LAC 33:IX.1123, Table 3 to ensure 2.3 mg/L DO criterion applies to streams only. The June 7, 2013, eastern LMRAP UAA for the revision of DO criteria explains that the recommended 2.3 mg/L DO criterion (applicable Mar-Nov) applies to streams in the eastern LMRAP. However, as currently presented in the draft rule revisions for LAC 33:IX.1123, Table 3 and given the applicability statement at LAC 33:IX.1113.C (see italics below), the 2.3 mg/L DO criterion (applicable Mar-Nov) would [incorrectly] apply to all waters (not just the stream waterbody type) within the subsegments identified.

   > *Numerical criteria identified in LAC 33:IX.1123, Table 3, apply to the specified water bodies, and to their tributaries, distributaries, and interconnected streams and water bodies contained in the water management subsegment…*

   The applicability to streams only needs to be clarified in LA's WQS, especially for those subsegments that include various waterbody types. Clarification could be accomplished by adding an EndNote to LAC 33:IX.1123, Table 3. For example, an EndNote could be added to the row that reads "Lake Pontchartrain Basin (04)" with an accompanying description at the end of the table to clarify that the ecoregion-based 2.3 mg/L DO criterion applicable Mar-Nov only applies to streams, with the 5.0 mg/L criterion applying Dec-Feb in streams and year round to other waterbody types within the subsegment.

2. Use of "Ecoregion boundary" in subsegment descriptions. LDEQ revised the description for subsegment 040302 from "Amite River – From LA-37 to Amite River Diversion Canal" to "Amite River – From La. Highway 37 to *LMRAP Ecoregion boundary*" (italics added for emphasis). The following is a list of all subsegments in which LDEQ has similarly referred to the ecoregion boundary in subsegment descriptions:
   - 040302 and 040306
   - 040902 and 040913
   - 040904 and 040914
   - 040905 and 040915
   - 040908 and 040917
   - 041204

   While we understand that subsegment boundaries were revised to better reflect ecoregion boundaries (and do not have concerns with this approach), we believe it would be clearer (for on-the-ground reference/ implementation) to refer to latitude/longitude or actual physical features (e.g., distance + direction from nearby road or highway crossing) in the subsegment descriptions rather than referring to "ecoregion boundary." (Note that this comment only pertains to the subsegment descriptions themselves, not to the boundary delineations.)

Questions (for informal discussion):

We appreciate LDEQ's December 10, 2014, response to a comment in EPA's November 25, 2013, technical approval of the eastern LMRAP UAA for the revision of DO criteria. EPA's comment pertained to the appropriateness of applying the 2.3 mg/L DO criterion to estuarine segments and tidally-influenced streams. LDEQ's response indicates that the eastern LMRAP UAA does cover tidally-influenced reference waters and some areas with estuarine characteristics.

- Given the above, we assume that LDEQ plans to apply the 2.3 mg/L DO criterion (applicable Mar through Nov) to all streams (including those tidally-influenced) within the "estuarine" subsegments, not just to inland, freshwater streams (please confirm).
- Were eastern LMRAP reference sites 0264 (Pass Manchac) and 3496 (Middle Bayou) among the noted tidally-influenced reference waters? (We assume so, given the much higher specific conductivity levels at these two sites compared to others.) Also, we were wondering if LDEQ could elaborate on why there was such a high total abundance at site 0264. Were there other reference sites also considered to be tidally-influenced? (Table D-1 of the eastern LMRAP UAA indicates that Striped Mullet and Gulf Menhaden were both highly abundant and present in 12 and 5 collections, respectively).
- As we understand, the objective of eastern LMRAP UAA was to complete a qualitative and quantitative ecological comparison between streams in the eastern and western portions of the LMRAP ecoregion. The purpose for the comparison was to evaluate the appropriateness of applying the Mar-Nov 2.3 mg/L DO criterion (originally developed for streams in the western portion of the LMRAP) to streams in the eastern portion of the LMRAP. If there was a greater prevalence of tidally-influenced reference streams in the eastern LMRAP compared to the western LMRAP (which seems to be the case), can LDEQ elaborate on how this difference was considered in the comparison and in the ultimate determination that it would still be appropriate to apply the 2.3 mg/L DO criterion to streams in the eastern LMRAP? (Note that we only pose these questions to further our general understanding of how LDEQ considered this topic in its evaluation; our questions are not intended to express a position one way or the other on the topic.)